LAIMS

WHAT IS CLAIMED IS:

1. A method of treating an IL-23 mediated disorder comprising administering an effective amount of an:

a) agonist of IL-23; or

b) antagonist of IL-23.

2. The method of Claim 1, wherein the disorder is a:

a) gastrointestinal disorder; or

b) nervous system disorder.

3. The method of Claim 1, wherein the agonist or antagonist specifically binds to a polypeptide or nucleic acid of:

a) p19; or

b) IL-23R.

4. The method of Claim 1, wherein the agonist or antagonist comprises a:

a) nucleic acid; or

b) small molecule.

5. The method of Claim 4, wherein the nucleic acid comprises:

a) anti-sense nucleic acid; or

b) small interfering RNA (siRNA).

6. The method of Claim 1, wherein the agonist or antagonist comprises:

a) an antigen binding fragment of an antibody; or

b) a soluble receptor derived from IL-23R.

7. The method of Claim 6, wherein the agonist or antagonist is:

a) a polyclonal antibody;

b) a monoclonal antibody;

c) a humanized antibody or binding fragment thereof;

d) an Fab, Fv, or $F(ab')_2$ fragment;

e) a peptide mimetic of an antibody;

f) detectably labeled.

8. The method of Claim 2, wherein treatment is with an antagonist of IL-23 and the nervous system disorder comprises a:

a) central nervous system (CNS) disorder; or

b) peripheral nervous system (PNS) disorder.

9. The method of Claim 1, wherein treatment is with an antagonist of IL-23 and the condition or disorder comprises:

a) multiple sclerosis;

b) neuropathic pain;

c) amyotrophic lateral sclerosis (ALS);

d) ischemic brain injury; or

e) inflammatory bowel disorder.

10. The method of Claim 9, wherein the inflammatory bowel disorder comprises:

a) Crohn's disease;

b) ulcerative colitis;

c) celiac disease;

d) mucosal thickening;

e) epithelial hyperplasia;

f) inflammation of the submucosa or tunica muscularis; or

g) infiltration by granulocytes or macrophages.

11. The method of Claim 1, wherein the agonist or antagonist if IL-23 is co-administered with an agonist or antagonist of:

a) IL-12;

b) interferon-gamma (IFNgamma);

c) IL-6;

d) IL-17; or

e) IL-10.

12. The method of Claim 2, wherein the nervous system disorder is exacerbated by an antagonist of:

a) IL-12; or

b) IFNgamma.

13. The method of Claim 2, wherein the nervous system disorder:

a) comprises an increase in microglial expression of p19;

b) comprises an increase of CNS macrophage expression of IL-23R or p19; or

c) can be generated in human or animal subject by administration of exogenous IL-17 producing cells to the subject.

14. The method of Claim 1, wherein treatment with the antagonist of IL-23 inhibits activation of a resident microglial cell.

15. The method of Claim 14, wherein the:

a) microglial cell is $CD11b^{+}CD45^{low}$; or

b) activation comprises up-regulation of MHC-Class II.

16. The method of Claim 1, wherein the antagonist of IL-23 inhibits:
    a) expression of IL-1beta by a macrophage;
    b) expression of tumor necrosis factor (TNF) by a macrophage; or
    c) infiltration of a macrophage into the central nervous system (CNS).

17. The method of Claim 16, wherein the macrophage is:
    a) $F4/80^{+}$;
    b) $CD11b^{+}$;
    c) $CD11c^{-}$; or
    d) $B220^{-}$.

18. A purified or isolated IL-17 producing $CD4^{+}$ T cell that upon treatment with IL-23 has a 10-fold higher expression of at least one gene of Table 10B when compared to treatment with IL-12.

19. The IL-17 producing T cell of Claim 18 that is:
    a) $CD62L^{lo}CD44^{hi}$; or
    b) $CD45RB^{lo}$.

20. A method of generating the IL-17 producing $CD4^{+}$ T cell of Claim 18, comprising contacting a T cell with a substantially pure preparation of IL-23 or an agonist thereof.